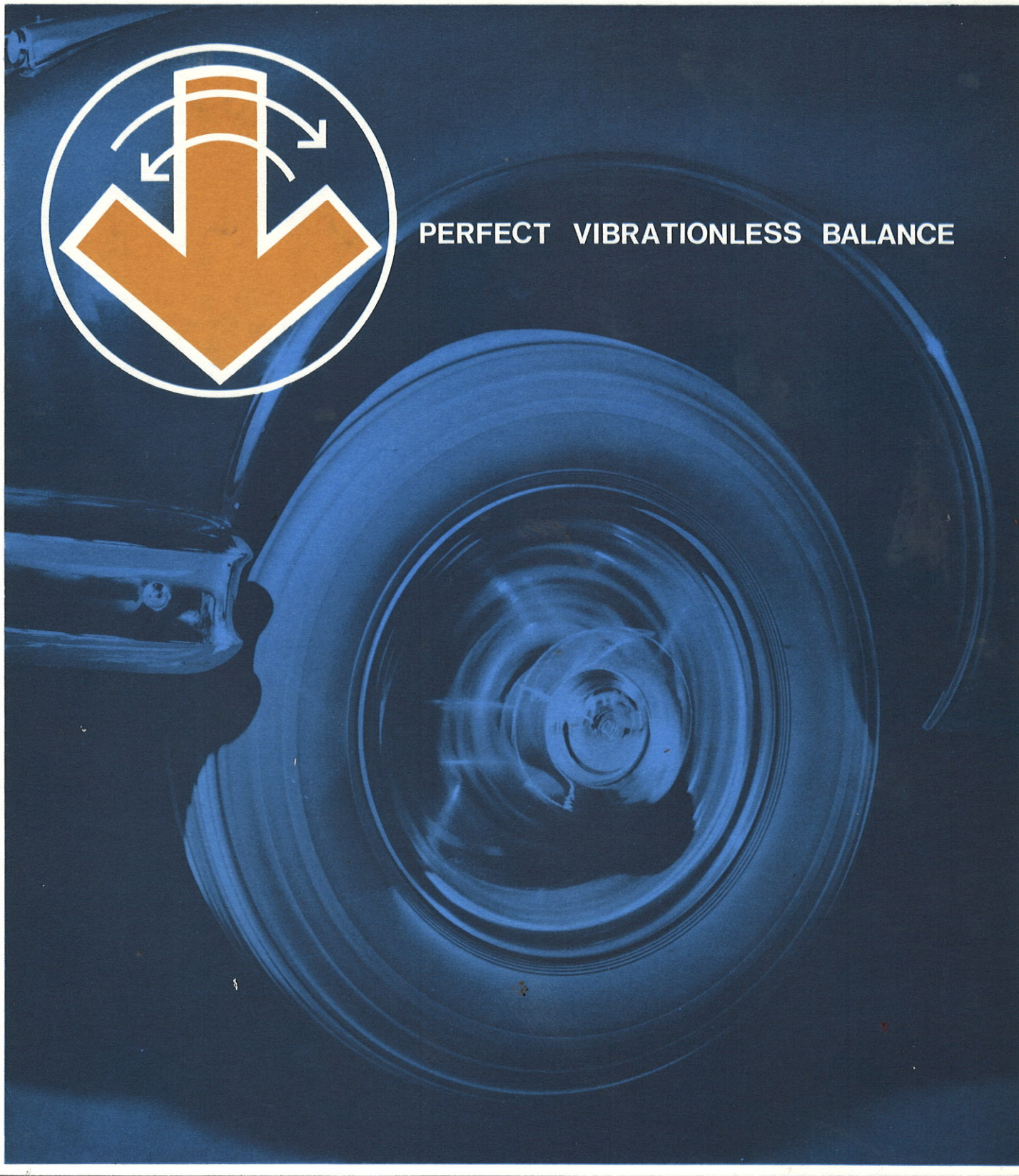
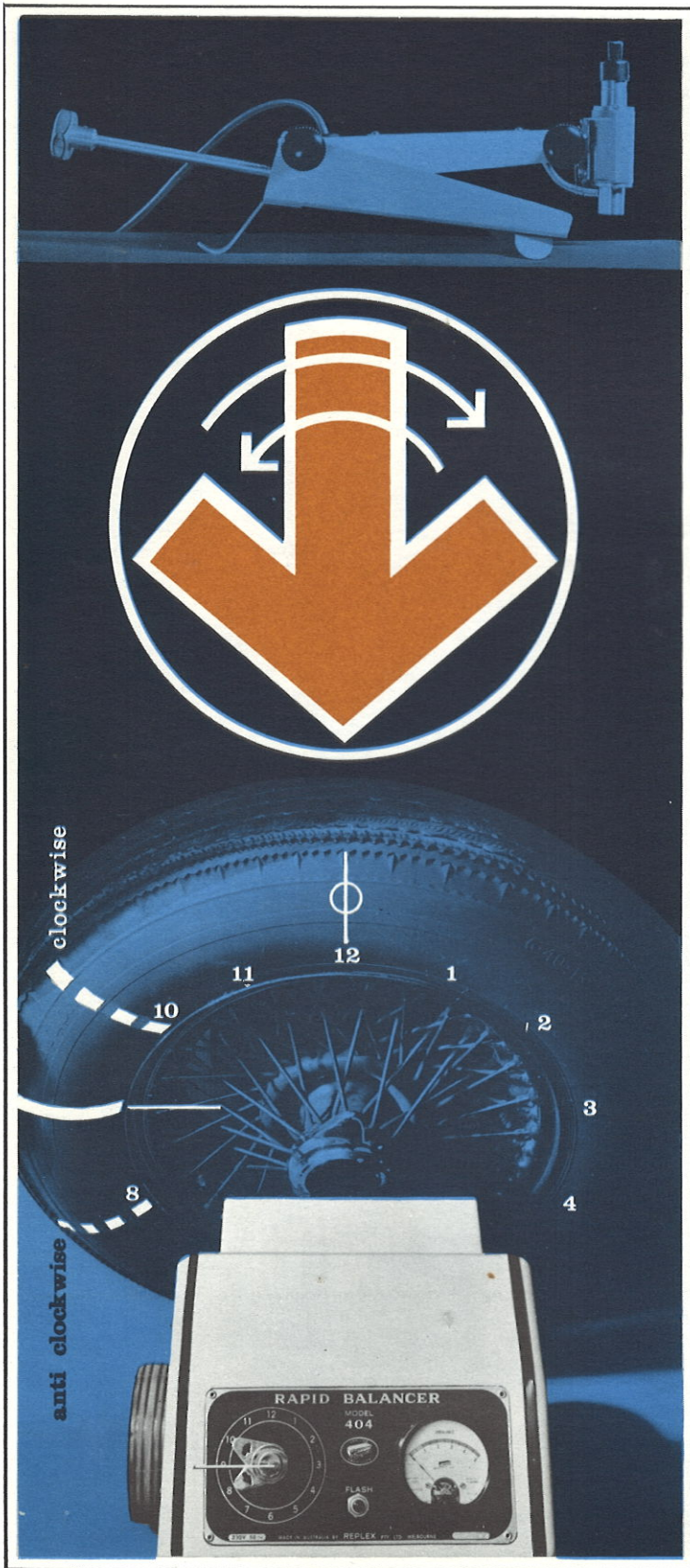


B1

FINEST ELECTRONICS



perfect balance

with new scientific two-way balancing method

The new Repco 404 Electronic Wheel Balancer introduces an advanced technique into static and dynamic wheel balancing with a very high degree of accuracy and convenience of operation. This method involving electronically checking unbalance clockwise and anti-clockwise is termed the "two-way" balance, with the mean of the two readings providing the most accurate placing for the wheel weights to bring the wheel into a perfect vibrationless balance.

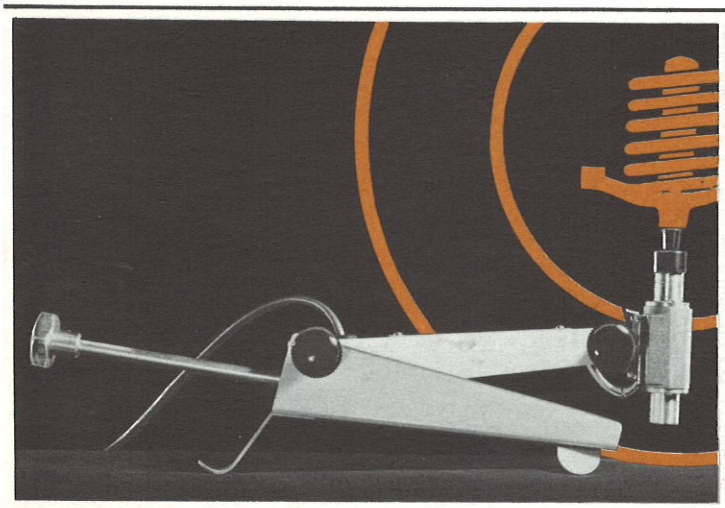
The pick-up head and support have been completely redesigned and Repco Engineers have combined convenience with scientific precision by evolving a single point setting for both static and dynamic readings, a factor that greatly increases the speed of operation. Another advantage is the inbuilt wheel spinner driven by a powerful 2 h.p. series wound 7,000 r.p.m. motor which can be run in either direction by operating relevant pedals on back of machine.

A separate spinner unit with a 5 h.p. 3-phase motor is available for truck and bus balancing.

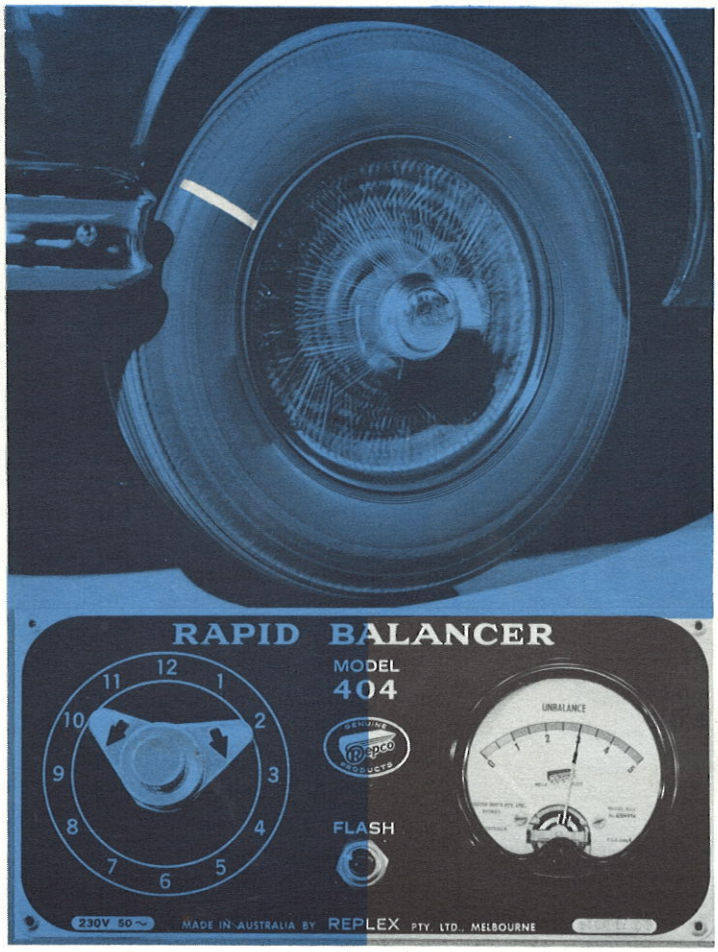
Shelves provided in balancer for wheel weights and tools.

This new equipment reaches a new high in quality and function and is undoubtedly the most advanced technical unit of its type.

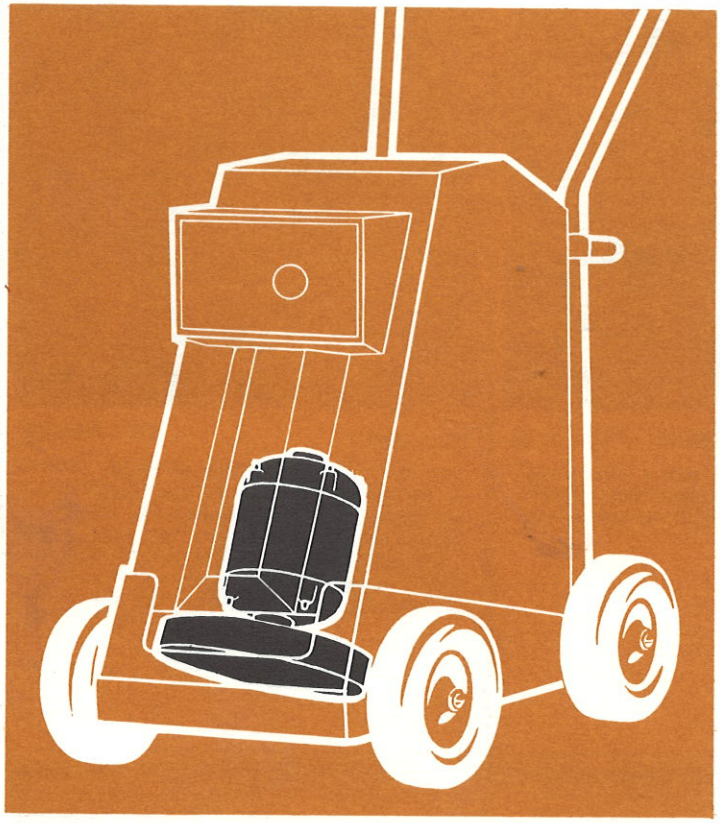
Repco electronic wheel balancer



PICK-UP HEAD AND SUPPORT
This unit has been completely redesigned and features an easy-to-operate support arm which has sufficient lift to cater for both passenger and commercial vehicles. The operator by turning the outer control knob can adjust the height of the pick-up head without the inconvenience of lying under the vehicle. Only one setting of this unit is necessary for reading static and dynamic unbalance. A magnet connected to the plunger in the pick-up head generates varying voltage by its movement in and out of coils; therefore the greater the movement in the suspension, the more voltage generated and transmitted to the meter on the Balancer.



ELECTRONIC UNIT has two separate functions
a.
It measures the degree of incoming voltage from the pick-up head on the unbalance meter. This reading indicates unbalance in the wheel; there is no reading at all from a perfectly balanced wheel.
b.
Impulses received from the pick-up head (on the down stroke) are converted to trigger the tube flash which shows the position of unbalance in the wheel assembly.



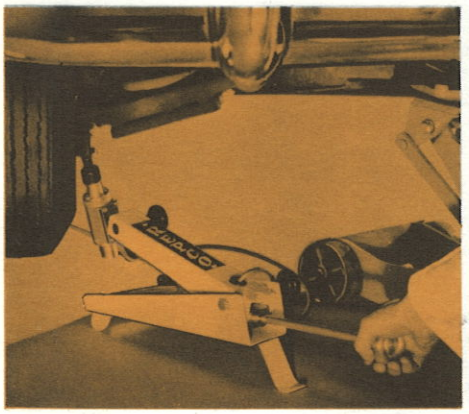
2 H.P. MOTOR

This powerful spinner motor will cope with all types of passenger car and light commercial wheel assemblies, including those fitted with disc or self-adjusting brakes. The motor is a 2 h.p. series wound 7,000 r.p.m. unit, which can be run in either direction by using foot-pedal switches on operating side of machine. The switching has been so arranged that no damage is incurred if both switches are pressed simultaneously. The inbuilt spinner wheel provides an added convenience in operation with a very positive drive to vehicle wheel.

HEAVY DUTY BALANCING EQUIPMENT FOR COMMERCIAL VEHICLES **403**

Includes 5 h.p. spinner, pick-up head and modified 404 Balancing Unit. The separate spinner assembly has a very powerful 5 h.p. 3-phase motor complete with its own push-button switching, and a large pulley for driving truck and bus wheels at high speeds.

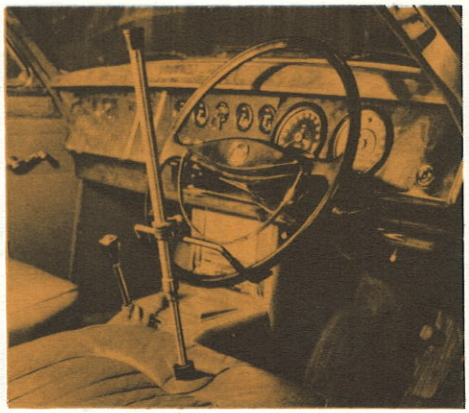
Repco two way system



PICK-UP HEAD IN POSITION **1.**

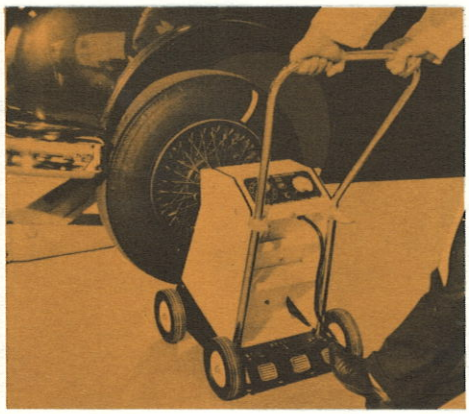
After raising both front wheels place pick-up head in position under lower wishbone or suspension support and adjust height until the lower edge of the dust cover is in line with the gauge line on the aluminium body, see figure 1A. Position of the pick-up head unit should be at right angles to the lower suspension arm.

1A.



STEERING-WHEEL HOLDER **2.**

Lock steering-wheel with Repco steering-wheel holder (Part No. 320) to keep wheels in the straight ahead position. Mark the tyre with chalk or tape.



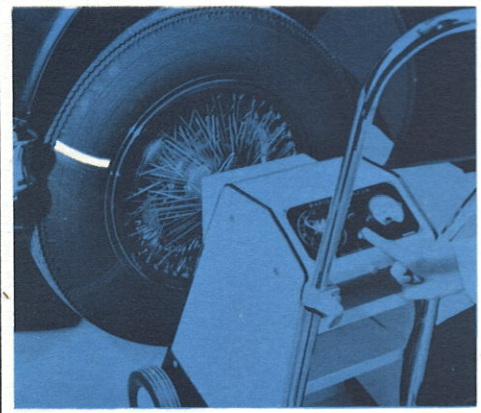
SPIN WHEEL **3.**

Push the balancer drive spinner wheel firmly against tyre and spin the wheel clockwise by pressing relevant foot switch. If the wheel is out of balance the unbalance meter needle will rise as the speed of the wheel increases, until a peak meter reading is attained. After this the needle declines.

An average wheel is 4 oz. out of balance. The following is a typical example showing the terrific pounding force developed in passenger and light commercial vehicle wheel assemblies through an out-of-balance wheel condition.

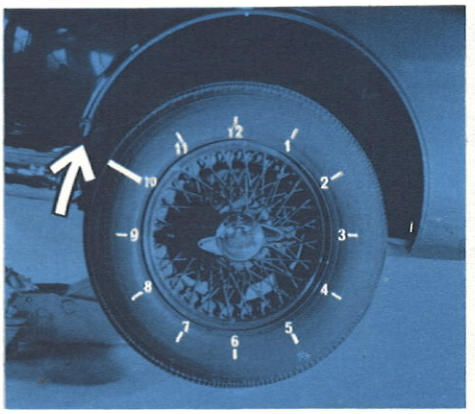
30 M.P.H.	1 oz.	2 oz.	3 oz.	4 oz.
	5.37 lb.	10.74 lb.	16.11 lb.	21.48 lb.

for perfect vibrationless wheel balancing



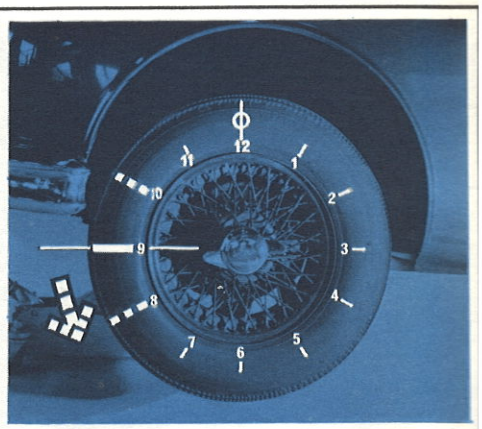
FLASH-LIGHT 4.

Remove balancer from contact with wheel when the peak has been passed; the meter needle will then again rise to its peak as the wheel slows; press flash-button. The out-of-balance position must be read at this peak; note the position of chalk-line as the wheel appears stationary under the stroboscopic flash.



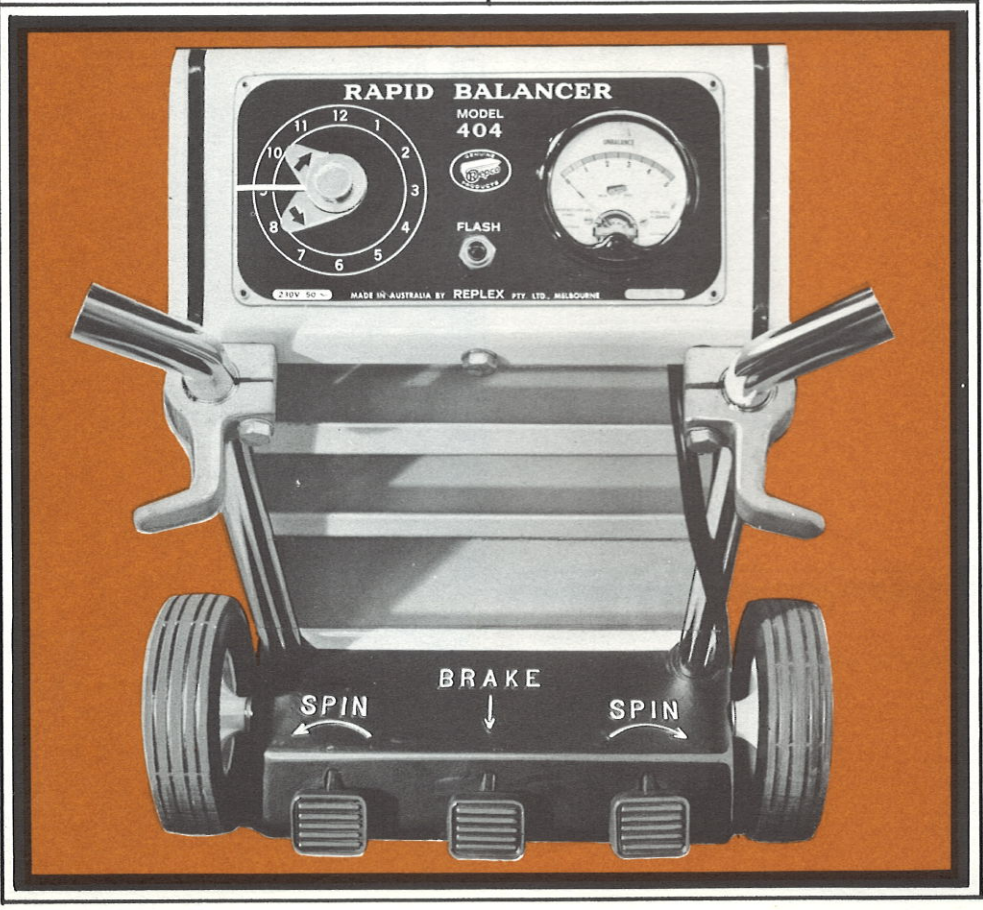
CLOCKWISE READING 5.

Imagine clockface on tyre side wall; relate clock-hand on balancer instrument panel, with relevant chalk-mark position on wheel.



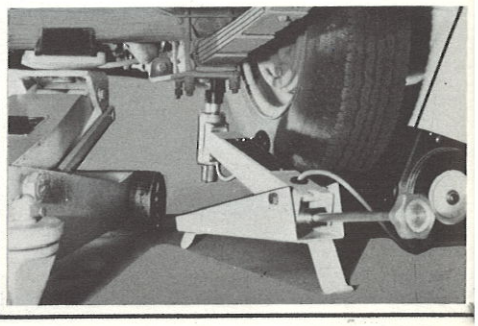
ANTI-CLOCKWISE READING 6.

Repeat operation anti-clockwise and set other clock-hand accordingly. Take an imaginary mean line between tails of arrows on clock-hands and set wheel with the chalk-mark at the calculated mean position; add wheel weights at 12 o'clock.



BALANCING REAR WHEELS 7.

Using rubber block on jack, raise rear axle leaving one wheel on the ground. Position pick-up head as close to wheel as possible. Repeat operations as directed for front wheels. If the vehicle drive train is too stiff for balancing machine motor, utilize car engine using top gear and slowly accelerate. At peak reading press flash-button and note position of chalk-mark. Shift gear to neutral and stop wheel. Rotate wheel by hand and set chalk-mark in position as it appeared under the stroboscopic flash. Add weights at 12 o'clock.



wheel weights

FOR CARS

Geometrically matched to look and fit better. Replex Wheel Weights will butt closely together.

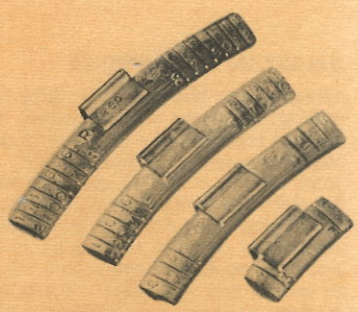
- Will accurately fit all modern rims.
- Patented clip is cast and anchored into body of weight.
- Ideally suitable for tubeless tyres.
- Available in ½, 1, 1½, 2, 2½, 3 and 4 ounces. also in grams.

FOR TRUCKS AND BUSES

Available in two types: No. 1 for the popular or light section rims; No. 2 for heavy section rims.

	No. 1 Light Section Rim		No. 2 Heavy Section Rim		
Size	4	8	4	10	12
Std. pkg.	48	24	48	24	24

Being tailored for the job, weight increments are shown on the weight to make cutting off easy should fine adjustment of weight be necessary to *ensure perfect balance.*



specifications

STANDARD EQUIPMENT **404**

Mobile Cabinet: containing electronic circuit, flash tube, motor spinner unit and switch assembly, storage trays.

Pick-up head assembly with quick lift support arm. *Rubber block* for use when balancing rear wheels. Box of *sample wheel weights,* and weight-removing tool. *Instruction book.*

OPTIONAL ACCESSORIES

Steering-wheel holder part No. 320. Spinner motor (5 h.p.) for commercial vehicles No. 412. Combined wheel weight hammer and weight-removing tool part No. 420.

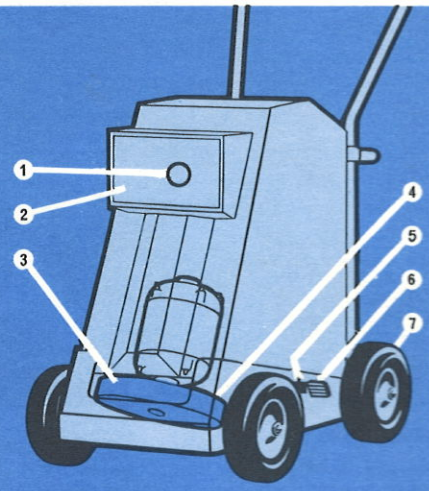
ELECTRICAL AND PACKING INFORMATION

Passenger and light commercial model:
Electrical supply — 200-240 volt, 50 cycle, single phase.
Spinner Motor — 2 h.p., 7,000 r.p.m.

Truck and bus:
Electrical supply — to cabinet 200-240 volt, 50 cycle, single phase.
— to motor 415 volt, 50 cycle, 3 phase.

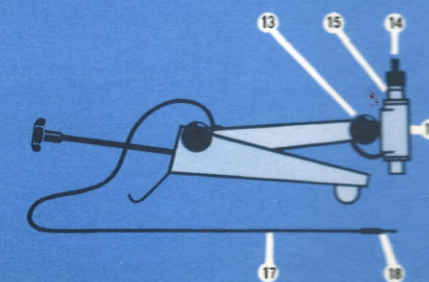
Supply of units in other voltages and cycles are available on request.

Packing — Nett weight: 121 lbs. 55 kilograms
Packed weight: 185 lbs. 84 kilograms
Case size: 29" x 20" x 28"
73.66 x 50.80 x 71.12 cm.



spare parts

1. Flash Tube 404/81
2. Light Box Glass 404/73
3. Pulley (Motor) 404/80
4. Brake Shoe 404/88
5. Motor Toggle Switch 404/48
6. Pedals 404/85
7. Wheels 404/50
8. Pointer (Anti-clockwise — clockwise) 404/82
9. Locking Nut Pointer (Small) 404/83
10. Locking Nut Pointer (Large) 404/84
11. Switch — Flash 404/56
12. Meter (Unbalance) 404/18
13. Knobs Pick-up Base 86/3
14. Tip Pick-up Head 404/69
15. Dust Cover Pick-up Head 404/33
16. Pick-up Head 404/86
17. Pick-up Lead & Phone Plug 6/80
18. Phone Plug 6/33
19. Rubber Block 6/42



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Basildon, Essex, England

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